

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-9 are pending in the present application, Claims 1, 2, 6, 8, and 9 having been amended by the present amendment. Claims 1, 2, 6, 8, and 9 are amended to more clearly describe and distinctly claim the subject matter Applicant regards as the invention without the introduction of new matter.

In the outstanding Office Action, Claims 1 and 5-7 were rejected under 35 U.S.C. §102(e) as anticipated by Kitajima (U.S. Patent No. 6,768,280); Claims 2 and 7 were rejected under 35 U.S.C. §103(a) as unpatentable over Kitajima and Akao (U.S. Patent No. 5,883,484); and Claims 3, 4, 8, and 9 were objected to for depending upon a rejected base claims, but would be allowable if rewritten in independent form.

Applicant acknowledges with appreciation the indication of allowable subject matter.

With respect to the rejection of Claim 1 as anticipated by Kitajima, Applicant respectfully traverses the rejection because Kitajima does not teach or suggest every element of amended Claim 1.

Amended Claim 1 is directed toward a motor control device that includes an electric voltage command value calculation means for inputting an electric current command value every control cycle, calculating an electric current deviation integrated value by integrating an electric current deviation between the electric current command value and an actual electric current value at a coil of a motor, and calculating an electric voltage command value in accordance with the electric current deviation integrated value; a direct current power source unit configured to output a power source electric voltage of a direct current; an inverter circuit configured to output a pulse electric voltage generated by switching the power source electric voltage, by a switching element, to the motor; a control means for controlling

a switching timing of the switching element based on the electric voltage command value; and the electric voltage command value calculation means controls the electric current deviation integrated value not to exceed a saturation electric voltage value. The saturation electric voltage is a maximum value of the electric voltage outputted from the inverter circuit to the motor. The above configuration restrains abnormalities such as overcurrent when a motor is suddenly stopped.¹

Claim 1 recites "...the electric voltage command value calculation means controls the electric current deviation integrated value not to exceed a saturation electric voltage value, wherein the saturation electric voltage value is a maximum value of the electric voltage outputted from the inverter circuit to the motor." Indeed, Kitajima does not teach or suggest this element of Claim 1.

On the contrary, Kitajima describes deciding whether or not an output voltage is in a saturated state.² The objective of Kitajima is to prevent output voltage saturation from occurring readily.³ The claimed "electric current deviation integrated value" is not the output voltage. The objective of the claimed invention is different than that of Kitajima. The Specification at paragraph [0050] describes a non-limiting embodiment of the claimed invention as follows:

Because the q-axis electric current deviation integrated value $\Sigma\Delta I_q$ and the d-axis electric current deviation integrated value $\Sigma\Delta I_d$ are limited to be equal to or less than the saturation electric voltage V_O , the electric current deviation integrated value does not increase exceeding the electric voltage output performance of the direct current power source portion 40 and the inverter circuit 30. Thus, the generation of the abnormality such as the overcurrent, or the like, when the motor 50 is suddenly stopped can be restrained. In addition, the delay of the response can be improved when the rotational direction of the motor 50 is suddenly reversed or when the rotation of the motor 50 is suddenly reduced, or the like.

¹ Specification, paragraph [0050].

² Kitajima, col. 10, lines 19-21.

³ Kitajima, col. 10, lines 30-31.

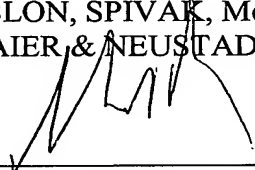
Furthermore, the voltage saturation judging circuit 15 of Kitajima detects a saturation of an output voltage that has already occurred. However, the claimed "electric voltage command value calculation means" controls the electric current deviation not to exceed a saturation electric voltage so as to restrain an occurrence of an output voltage saturation.

In view of the above-noted distinctions, Applicant respectfully submits that Claims 1 (and dependent Claims 2-5) patentably distinguish over the Kitajima. In addition, Applicant respectfully submits that Claims 6-9 patentably distinguish over Kitajima for at least the reasons given for Claim 1.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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